

## REMARKS

Applicant respectfully requests reconsideration of the subject application in view of the amendments and remarks set forth herein.

### 1. Claim Amendments

Applicant has amended independent claims 1, 22 and 24 to more precisely define the presently claimed subject matter. Support for the claim amendments is found in the specification, as filed (see, e.g., page 27, line 12 et seq.). Applicant has also amended claims 1, 7 and 8 to further clarify the subject matters thereof. Finally, applicant has also canceled claim 25, without prejudice. Applicant respectfully submits that no new matter is introduced by way of the foregoing claim amendments. Prompt entry of the proposed claim amendments is respectfully requested.

### 2. Double Patenting Rejection

Applicant notes the outstanding obviousness-type double patenting rejection of claims 1-4, 7, 9 and 14-27 in view of claims 1-40 of applicant's previously issued U.S. Patent No. 6,558,568. Applicant submits herewith a Terminal Disclaimer which, *inter alia*, disclaims any term of the subject application that would extend beyond the term of U.S. Patent No. 6,558,568.

The Commissioner is authorized to charge the required fee for entry of this terminal disclaimer of \$130.00 pursuant to 37 C.F.R. §1.20(d), and any additional fees due or to credit any overpayment to Deposit Account No. 503570. **A duplicate copy of this sheet is enclosed.**

Applicant respectfully submits that the enclosed Terminal Disclaimer obviates the outstanding double patenting rejection. Reconsideration and withdrawal of such rejection are requested.

### 3. **Section 112 Rejections**

Applicant notes the Section 112 issues raised in the outstanding Office Action, and responds as follows:

- Claim 1: Applicant has addressed the antecedent issue with respect to the recited “heat sensitive device” by substituting the article “a” for “said”.
- Claims 4 and 7: Applicant has addressed the noted inconsistency by amending claim 7 to depend directly from independent claim 1. With reference to claim 4, applicant respectfully submits that the specification provides support for such recitation – see page 24, lines 3-6 and page 25, lines 9-15. Accordingly, applicant has not amended dependent claim 4.
- Claim 8: Applicant has amended claim 8 to address the ambiguity noted by the Examiner. As amended, claim 8 recites that the flexible substrate is “of sufficient flexibility to conform to the size and shape of a heat sensitive device.” Support for the amended recitation is found in the specification, as filed – see page 7, lines 1-6; page 24, lines 15-17; page 24, lines 26-30; and page 25, lines 1-15.

Applicant respectfully submits that the Section 112 issues raised in the outstanding Office Action have been fully addressed by the foregoing claim amendments and remarks. Reconsideration and withdrawal of the outstanding Section 112 rejection are respectfully requested.

### 4. **Section 102 Rejections**

The outstanding Office Action sets forth two (2) rejections under 35 USC §102(b), as follows:

- Claims 1-13, 20 and 22-27 are rejected based on U.S. Patent No. 4,543,281 to Pedersen et al. (the “Pedersen ‘281 patent”); and
- Claims 1-2, 4-6, 9, 17-18 and 22-27 are rejected based on U.S. Patent No. 3,973,397 to Chase et al. (the “Chase ‘397 patent”).

Each of the foregoing Section 102 rejections is addressed in turn.

A. Rejection based on Pedersen '281 Patent

The Pedersen '281 patent is directed to a fire or flame barrier. The disclosed barrier is a "highly filled polymer based composite, the principal components of which are an ethylene copolymer, aluminum hydroxide, i.e.  $\text{Al}(\text{OH})_3$  and calcium carbonate. This fire or flame barrier material is, as extruded or molded, or coated at ambient temperature a solid having well defined physical and chemical properties." [Pedersen '281 patent, col. 2, lines 12-15.] The Pedersen '281 patent further discloses that the fire or flame barrier material is advantageous because:

- (1) When heated to certain elevated temperatures, foaming and an endothermic reaction occur. One of the by-products of this endothermic reaction is water which, in the course of evaporating, delays the heat rise at the heat exposed surface and acts as a foaming agent; and
- (2) the material of the present invention, when directly exposed to elevated temperatures is transformed into an intumescent polymeric foam like layer having a firm, ceramic-like structure. This intumescent layer shields the remaining non-exposed portion of the thermoprotective material and has good heat insulating properties at temperatures up to 2300.degree. F. and higher. [Pedersen '281 patent, col. 1, lines 40-53.]

Applicant respectfully submits that each of applicant's independent claims, i.e., claims 1, 22 and 24, as amended, patentably distinguish over the Pedersen '281 patent because, *inter alia*, the Pedersen '281 patent fails to teach or suggest the potential utility of hydroxides as a heat absorption material in connection with a flight data recorder. Rather, the Pedersen '281 patent contemplates conventional industrial applications, as outlined at col. 3, lines 40-68. There is nothing in the teachings of the Pedersen '281 patent that would motivate a skilled artisan to contemplate the use of hydroxides as a heat absorption material for flight data recorders, wherein decomposition of the hydroxide would provide advantageous heat absorption functionalities at the elevated temperatures potentially encountered thereby.

For at least the foregoing reason, applicant respectfully requests reconsideration and withdrawal of the outstanding Section 102 rejection of independent claims 1, 22 and 24, as amended. In addition, dependent claims 2-13, 20, 23, 26-27 – which depend directly or indirectly from independent claims 1, 22 and 24 – patentably distinguish over the Pedersen '281 patent for at least the reasons noted herein with respect to independent claims 1, 22 and 24. Accordingly, reconsideration and withdrawal of the outstanding Section 102 rejection of such claims based on the Pedersen '281 patent are also respectfully requested.

*B. Rejection based on Chase '397 Patent*

The Chase '397 patent is directed to a rocket motor that includes a liner positioned between the motor case and the propellant. As set forth in claim 1 of the Chase '397 patent, the liner is bonded to the inner surface of the rocket motor case and includes “a cured elastomer containing 75-100 parts of a terpolymer of ethylene, propylene and a non-conjugated diene, up to 25 parts of at least one other elastomer, 40 to 100 parts of an inert filler material selected from the group consisting of silica and asbestos and 20-80 parts of ablative filler materials other than lead chloride which will decompose at temperatures near to or above the decomposition temperature of the elastomer content of the liner.” Among the ablative materials disclosed in the Chase '397 patent are magnesium oxide and calcium oxide.

As with the Pedersen '281 patent discussed above, applicant respectfully submits that each of applicant's independent claims, i.e., claims 1, 22 and 24, as amended, patentably distinguish over the Chase '397 patent because, *inter alia*, the Pedersen '397 patent fails to teach or suggest the potential utility of hydroxides as a heat absorption material in connection with a flight data recorder. There is nothing in the teachings of the Chase '397 patent that would motivate a skilled artisan to contemplate the use of hydroxides as a heat absorption material for flight data recorders, wherein decomposition

of the hydroxide would provide advantageous heat absorption functionalities at the elevated temperatures potentially encountered thereby.

For at least the foregoing reason, applicant respectfully requests reconsideration and withdrawal of the outstanding Section 102 rejection of independent claims 1, 22 and 24, as amended. In addition, dependent claims 2, 4-6, 9, 17-18, 23, 26-27 – which depend directly or indirectly from independent claims 1, 22 and 24 – patentably distinguish over the Chase ‘397 patent for at least the reasons noted herein with respect to independent claims 1, 22 and 24. Accordingly, reconsideration and withdrawal of the outstanding Section 102 rejection of such claims based on the Chase ‘397 patent are also respectfully requested.

#### **5. Section 103 Rejections**

The outstanding Office Action sets forth six (6) rejections under 35 USC §103(a), as follows:

- Claims 9, 17-19, 23 and 27 are rejected based on the Pedersen ‘281 patent in view of U.S. Patent No. 5,453,453 to Lamon et al. (the “Lamon ‘453 patent”);
- Claims 9, 14-16, 23 and 27 are rejected based on the Pedersen ‘281 patent and the Lamon ‘453 patent, further in view of U.S. Patent No. 4,421,661 to Claar et al. (the “Claar ‘661 patent”);
- Claims 9, 21, 23 and 27 are rejected based on the Pedersen ‘281 patent and the Lamon ‘453 patent, further in view of U.S. Patent No. 5,167,876 to Lem et al. (the “Lem ‘876 patent”);
- Claims 9, 19-20, 23 and 27 are rejected based on the Chase ‘397 patent in view of the Lamon ‘453 patent;
- Claims 9, 14-16, 23 and 27 are rejected based on the Chase ‘397 patent in view of the Claar ‘661 patent; and
- Claims 9, 21, 23 and 27 are rejected based on the Chase ‘397 patent in view of the Lem ‘876 patent.

Reconsideration of the foregoing Section 103 rejections is respectfully requested.

Applicant notes that the various secondary references are relied upon by the Examiner to address specific hydroxide materials. Thus, the Lamon '453 patent is relied upon with respect applicant's claims that recite magnesium hydroxide, calcium hydroxide and/or beryllium hydroxide (Office Action, paragraphs 5 and 8); the Claar '661 patent is relied upon with respect to applicant's claims that recite lithium hydroxide, sodium hydroxide and/or potassium hydroxide (Office Action, paragraphs 6 and 9); and the Lem '876 patent is relied upon with respect to applicant's claims that recite ammonium hydroxide (Office Action, paragraphs 7 and 10).

However, none of the secondary references, whether taken alone or in combination with each other or with the primary references (i.e., the Pedersen '281 patent and/or the Chase '397 patent), teach or suggest the potential utility of hydroxides as a heat absorption material in connection with a flight data recorder. Accordingly, applicant respectfully submits that the foregoing Section 103 rejections – which are directed to applicant's dependent claims – should be reconsidered and withdrawn because applicant's various dependent claims patentably distinguish over the art of record for at least the reasons noted with respect to independent claims 1, 22 and 24, as amended. Reconsideration and withdrawal of the Section 103 rejections are respectfully requested.

#### **6. Miscellaneous**

Applicant notes that a Supplemental Information Disclosure Statement was submitted under Certificate of Mailing dated October 13, 2005. Consideration of the art contained in such submission in connection with further substantive examination of this application is respectfully requested. Initialed copies of the PTO-1449 forms are requested from the Examiner evidencing consideration of such art with the next PTO communication.

Applicant respectfully submits that all claims are in condition for allowance. Prompt action leading to an early Notice to this effect is earnestly solicited. If the

Examiner believes that a telephone conversation may be useful in advancing prosecution of this application, he is invited to contact applicant's attorney at the number set forth below.

Respectfully submitted,

Date: December 27, 2005

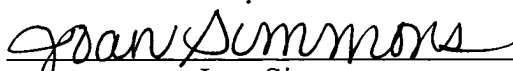


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I hereby certify that this Amendment and Response and a Terminal Disclaimer are being deposited with the United States Postal Service as first class mail, postage prepaid, addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on December 27, 2005.

Dated: December 27, 2005

  
Joan Simmons